

CLAIMS

1. ~~(Previously Withdrawn)~~ *Cancelled* A method of producing electromagnetic carrier-interference multiple-access communication signals, the method comprising the steps of:
providing for the generation of a plurality of electromagnetic carrier signals, the carrier signals having a plurality of frequencies within at least one predefined frequency window,
providing modulation of the carrier signals by a baseband information signal,
providing a phase-locking condition to the carriers to produce orthogonal interference wherein the carriers constructively add to create an interference information signal having a predetermined pulse width occurring at one or more predetermined time intervals, and
providing transmission of the modulated, phase-locked carrier signals.
2. ~~(Previously Withdrawn)~~ *Cancelled* The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the electromagnetic carrier signals are one or more broadband continuous-frequency signals.
3. ~~(Previously Withdrawn)~~ *Cancelled* The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the electromagnetic carrier signals have discrete frequencies.
4. ~~(Previously Withdrawn)~~ *Cancelled* The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 3 wherein the discrete-frequency electromagnetic carrier signals are incrementally separated in frequency.
5. ~~(Previously Withdrawn)~~ *Cancelled* The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 3 wherein the

discrete-frequency electromagnetic carrier signals are non-incrementally separated in frequency.

- Cancelled*
6. (~~Previously Withdrawn~~) The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the electromagnetic carrier signals have frequencies that are contained within a predetermined frequency band to allow for frequency separation of the carrier signals with respect to other carrier signals.
- Cancelled*
7. (~~Previously Withdrawn~~) The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the step of providing for generation of the carrier signals includes providing for frequency dithering of the carrier signals, the amount of the frequency dithering being substantially uniform in frequency variation with respect to time.
- Cancelled*
8. (~~Previously Withdrawn~~) The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the step of providing for generation of the carrier signals includes providing for time-offsetting of the carriers in order to time-offset the interference information signal.
- Cancelled*
9. (~~Previously Withdrawn~~) The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the step of providing phase-locking to the carriers effects the step of providing modulation of the carrier signals, the phase-locking condition being controlled by the baseband information signal.
- Cancelled*
10. (~~Previously Withdrawn~~) The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the step of providing modulation of the carrier signals comprises pulse amplitude modulation being applied to a plurality of the carriers, the pulse amplitude

modulation having a pulse width that is longer than the pulse width of the interference information signal.

- Cancelled*
11. (~~Previously Withdrawn~~) The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the step of providing modulation of the carrier signals wherein phase-shift key modulation of the carriers is effected within a phase-shift key time-interval equal to the pulse width of the interference information signal, the phase-shift key time interval being centered in each of the time interval in which the interference information signals occur, the phase-shift key modulation of the carriers being performed with respect to a predetermined pseudo-random code.
- Cancelled*
12. (~~Previously Withdrawn~~) The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the electromagnetic carrier signals are RF signals.
- Cancelled*
13. (~~Previously Withdrawn~~) The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the electromagnetic carrier signals are optical signals.
- Cancelled*
14. (~~Previously Withdrawn~~) The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 13 wherein the step of providing transmission of the carrier signals includes providing conversion of the optical carrier signals into RF carrier signals.
- Cancelled*
15. (~~Previously Withdrawn~~) The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the step of providing for the generation of the carrier signals includes providing for a plurality of groups of discrete carrier frequencies, each group having a predetermined number of carrier signals, the spacing between the discrete carrier frequencies in each of the groups determining the repetition rate of the interference information signal.

the number of discrete carrier frequencies in the groups determining the pulse width of the interference information signals, each interference information signal comprising a number of sub-pulses determined by the spacing between groups of carrier signals, the sub-pulses having sub-pulse widths determined by the number of groups of discrete carrier frequencies.

- Cancelled*
16. (~~Previously Withdrawn~~) The method of producing electromagnetic carrier-interference multiple-access communication signals recited in claim 1 wherein the step of providing for the generation of a plurality of electromagnetic carrier signals includes tapering the frequency versus amplitude window of the carrier signal amplitude distribution to reduce time-domain sidelobe energy of the interference information signal.

- Cancelled*
17. (~~Previously Withdrawn~~) An electromagnetic-wave communication system for transmitting and receiving carrier interference multiple access (CIMA) signals, the communication system including:
- a transmission system for generating and transmitting CIMA signals, the transmission system including:
 - a multicarrier signal generator for generating a plurality of carrier signals, the carrier signals having a plurality of frequencies,
 - a modulator for modulating the plurality of carriers with at least one information signal, the information signal modulating more than one of the carrier signals, and
 - a transmitter for transmitting the modulated carrier signals, and
 - a receiver to receive the transmitted, modulated carrier signals for generating a plurality of receive signals, the receiver combining at least two of the receive signals to produce the information signal.

- Cancelled*
18. (~~Previously Withdrawn~~) A transmission system for generating and transmitting CIMA signals, the transmission system including:

a multicarrier signal generator for generating a plurality of carrier signals, the carrier signals having a plurality of frequencies and a phase relationship, the frequencies and the phase relationship being controlled to provide at least one predetermined interference characteristic from combining the carrier signals,

a modulator for modulating the plurality of carriers with at least one information signal, the information signal modulating more than one of the carrier signals, and

a transmitter for transmitting the modulated carrier signals.

- Cancelled*
19. (~~Previously Withdrawn~~) A receiver for receiving and decoding delay-encoded CIMA signals, the receiver including:

a delay decoder for receiving a plurality of modulated carrier signals having a plurality of frequencies and a plurality of relative delays, the delay decoder providing a predetermined delay to each of the received carrier signals to remove the relative delays, and

a signal combiner coupled to an output of the delay decoder to combine the delay-decoded signals output from the delay decoder for providing a modulation signal output.

- Cancelled*
20. (~~Previously Withdrawn~~) A receiver for receiving and separating interfering multicarrier signals, the receiver including:

a multi-sample collector for collecting a plurality of samples of received multicarrier signals, the received multicarrier signals including at least one desired multicarrier signal and at least one interfering multicarrier signal, and

a canceller coupled to the multi-sample collector for receiving the plurality of samples, the canceller separating at least one of the desired multicarrier signals from the samples.

- Cancelled*
21. (~~Previously Withdrawn~~) An apparatus enabled to transmit at least one carrier signal occupying at least one predetermined frequency band, the apparatus including:

a multicarrier-signal generator capable of receiving an information-modulated electromagnetic signal and generating an electromagnetic information-modulated multicarrier signal therefrom, the information-modulated multicarrier signal having a plurality of information-modulated frequency modes, and

a carrier-frequency selector coupled to the multicarrier-signal generator, the selector capable of isolating at least one of the information-modulated frequency modes.

- Cancelled*
22. (~~Previously Withdrawn~~) An apparatus capable of providing frequency selection of a multicarrier transmission signal including:

a multicarrier-signal generator capable of receiving an electromagnetic seed signal and generating an information-modulated multicarrier signal, the multicarrier signal having a plurality of frequency modes, and

a filter coupled to the multicarrier-signal generator, the filter capable of isolating at least one of the information-modulated frequency modes.

- Cancelled*
23. (~~Previously Withdrawn~~) A method of communicating including:

accepting at least one modulation signal,

generating a modulated multicarrier signal having a plurality of frequencies wherein the at least one modulation signal is modulated onto the multicarrier signal and at least one of the frequencies is within at least one predetermined frequency band.

- Cancelled*
24. (~~Previously Withdrawn~~) A method of transmitting a multicarrier signal including:
generating at least one periodic signal having a plurality of incrementally spaced-in-frequency component signals, at least one component-signal frequency being within a desired frequency band, the at least one periodic signal having an amplitude that is a function of an information signal, and
coupling the periodic signal into a communication channel.

- Cancelled*
25. (~~Previously Withdrawn~~) A method of transmitting a CIMA signal including:

generating a plurality of electromagnetic carrier signals having a plurality of frequencies, and

combining the carrier signals to generate a superposition signal that includes an envelope signal modulating a superposition carrier signal having a superposition carrier frequency that is a function of the carrier signal frequencies.

- Cancelled*
26. (~~Previously Withdrawn~~) A method of transmitting a CIMA signal including:
- generating a plurality of electromagnetic carrier signals having a plurality of frequencies, each of the carrier signals having an amplitude that is a function of an information signal, and
 - combining the carrier signals to generate a superposition signal that includes an envelope signal modulating a superposition carrier signal having a superposition carrier frequency that is a function of the carrier signal frequencies, the envelope signal being a function of the information signal.

- Cancelled*
27. (~~Previously Withdrawn~~) A CIMA transmitter including:
- a signal generator capable of generating a plurality of electromagnetic carrier signals having a plurality of frequencies, and
 - a combiner coupled to the signal generator, the combiner capable of combining the carrier signals to generate a superposition signal that includes an envelope signal modulating a superposition carrier signal having a superposition carrier frequency that is a function of the carrier signal frequencies.

- Cancelled*
28. (~~Previously Withdrawn~~) A CIMA transmitter including:
- a signal generator capable of generating a plurality of electromagnetic carrier signals having a plurality of frequencies, each of the carrier signals having an amplitude that is a function of an information signal, and
 - a combiner coupled to the signal generator, the combiner capable of combining the carrier signals to generate a superposition signal that includes an envelope signal modulating a superposition carrier signal having a superposition carrier frequency

that is a function of the carrier signal frequencies, the envelope signal being a function of the information signal.

Cancelled
29. (Previously Withdrawn) A multicarrier transmitter including:

a seed-signal generator capable of generating at least one electromagnetic seed signal having a seed frequency,

a multicarrier generator coupled to the seed-signal generator, the multicarrier generator capable of receiving the seed signal and a frequency-shift signal having a frequency-shift frequency and generating a plurality of carrier signals having a plurality of carrier frequencies that are sums of the seed frequency plus integer multiples of the frequency-shift frequency, and

a frequency selector to select at least one of the carrier signals having at least one carrier frequency within at least one predetermined frequency band.

30. (Previously Amended) A multicarrier-signal generator including:

a pulse generator capable of generating a plurality of periodic pulses, the pulse generator adapted to generate and sum a plurality of carrier signals with respect to at least one predetermined phase relationship to produce the periodic pulses having at least one pulse period and a frequency spectrum comprising equally spaced frequencies, and

a frequency selector coupled to the pulse generator, the frequency selector capable of selecting the plurality of carrier signals to be within at least one predetermined frequency band.

31. (Previously Amended) A multicarrier-signal generator including:

a pulse generator capable of generating a plurality of periodic pulses, the periodic pulses having at least one pulse period and a frequency spectrum comprising a plurality of carrier signals having equally spaced frequencies with a frequency spacing that is a function of the at least one pulse period,

a modulator coupled to the pulse generator, the modulator adapted to modulate at least one information signal onto at least one of the periodic pulses, and

a frequency selector coupled to at least one of the modulator and the pulse generator, the frequency selector capable of selecting the plurality of carrier signals to be within at least one predetermined frequency band.

32. (Previously Amended) A method of generating a multicarrier signal including:

providing for generating a plurality of information-modulated periodic pulses including generating a plurality of carrier signals having equally spaced carrier frequencies, summing the carrier signals to generate periodic pulses having at least one pulse period, and modulating information onto the periodic pulses, the information-modulated periodic pulses having at least one of a set of signal characteristics that is a function of at least one information signal, the set of signal characteristics including amplitude, phase, time, and frequency, and

providing for selecting the plurality of carrier signals to be within at least one predetermined frequency band.

33. (Amended Twice) A method of generating a multicarrier signal including:

providing for generating a plurality of periodic pulses wherein the periodic pulses have at least one pulse period and a frequency spectrum comprising a plurality of carrier signals having equally spaced frequencies selected to be within at least one predetermined frequency band, and

providing for modulating the periodic pulses with at least one information signal to generate a plurality of information-modulated periodic pulses, the information-modulated periodic pulses having at least one of a set of signal characteristics that is a function of the information signal, the set of signal characteristics including amplitude, phase, and frequency.

34. (Previously Amended) The multicarrier-signal generator recited in claim 30 wherein the pulse generator includes a modulator adapted to modulate at least one set of signals, including the plurality of carrier signals and the plurality of periodic pulses, with at least one information signal.

35. (Previously Amended) The multicarrier-signal generator recited in claim 30 wherein the pulse generator includes a modulator adapted to modulate the plurality of periodic pulses with at least one information signal.
36. (Previously Amended) The multicarrier-signal generator recited in claim 30 wherein the pulse generator includes a modulator adapted to modulate the carrier signals with information symbols having durations of up to the pulse period of the periodic pulses.
37. (Previously Added) The multicarrier-signal generator recited in claim 30 wherein the pulse generator includes a modulator, the modulator adapted to perform at least one of a set of modulations, including amplitude modulation, phase modulation, time-offset modulation, and frequency modulation.
38. (Previously Amended) The multicarrier-signal generator recited in claim 30 wherein the pulse generator includes a coder and a modulator, the coder adapted to encode information signals, and the modulator adapted to modulate at least one coded information signal onto at least one of a set of signals, including the plurality of periodic pulses and the plurality of carrier signals.
39. (Previously Amended) The multicarrier-signal generator recited in claim 30 wherein the pulse generator includes a carrier generator and a combiner, the carrier generator adapted to generate the plurality of carrier signals and the combiner adapted to combine the plurality of carrier signals to generate the periodic pulses.
40. (Previously Added) The multicarrier-signal generator recited in claim 30 wherein the pulse generator is adapted to generate pulses having carrier frequencies that include at least one of a set of frequencies, including intermediate frequencies, radio frequencies, and optical frequencies.
41. (Previously Added) The multicarrier-signal generator recited in claim 30 wherein the pulse generator is adapted to produce a continuous pulse train.
42. (Previously Added) The multicarrier-signal generator recited in claim 30 wherein the at least one of the pulse generator and the frequency selector is adapted to provide a predetermined frequency-versus-amplitude window to the carrier signals.
43. (Previously Amended) The multicarrier-signal generator recited in claim 42 wherein the at least one of the pulse generator and the frequency selector is adapted to provide the predetermined frequency-versus-amplitude window belonging to any of a set of

tapered window functions, including Hanning, Hamming, Gaussian, triangular, Bartlett, Kaiser, and Chebyshev functions.

44. (Previously Amended) The multicarrier-signal generator recited in claim 30 wherein the pulse generator is adapted to provide an identical time-dependent frequency variation to each of the carrier signals.
45. (Previously Added) The multicarrier-signal generator recited in claim 30 wherein the pulse generator is adapted to perform multiple access with respect to at least one of a set of multiple-access protocols, the set including frequency division multiple access, time division multiple access, and code division multiple access.
46. (Previously Added) The multicarrier-signal generator recited in claim 30 wherein at least one of the pulse generator and the frequency selector is adapted to apply at least one set of coded time offsets to the carrier signals.
47. (Previously Added) The multicarrier-signal generator recited in claim 30 wherein the frequency selector is adapted to select a predetermined set of carrier frequencies allocated to a particular user in a communication system.
48. (Previously Added) The multicarrier-signal generator recited in claim 30 further including a coupler adapted to couple the carrier signals to a communication channel.
49. (Currently Amended and Previously Added) The multicarrier-signal generator recited in claim ~~20~~ 48 wherein the coupler includes a plurality of transceiver elements.
50. (Previously Added) The multicarrier-signal generator recited in claim 31 wherein the modulator is adapted to modulate the carrier signals with the at least one information signal.
51. (Previously Added) The multicarrier-signal generator recited in claim 31 wherein the modulator is adapted to modulate one or more superpositions of the carrier signals with the at least one information signal.
52. (Previously Amended) The multicarrier-signal generator recited in claim 31 wherein the modulator is adapted to modulate the carrier signals with information symbols having durations of up to the pulse period of the periodic pulses.
53. (Previously Added) The multicarrier-signal generator recited in claim 31 wherein the modulator is adapted to perform at least one of a set of modulation types, including

amplitude modulation, phase modulation, time-offset modulation, and frequency modulation.

54. (Previously Amended) The multicarrier-signal generator recited in claim 31 further including a coder adapted to encode information signals prior to modulation to generate a plurality of coded information signals, the modulator being adapted to modulate the coded information signals onto at least one of a set of signals, including the plurality of periodic pulses and the plurality of carrier signals.
55. (Previously Amended) The multicarrier-signal generator recited in claim 31 wherein the pulse generator includes a carrier generator adapted to generate the plurality of carrier signals, and a combiner adapted to combine the plurality of carrier signals to generate the periodic pulses.
56. (Previously Added) The multicarrier-signal generator recited in claim 31 wherein the pulse generator is adapted to generate pulses having carrier signals that include at least one of a set of frequencies, including intermediate frequencies, radio frequencies, and optical frequencies.
57. (Previously Added) The multicarrier-signal generator recited in claim 31 wherein the pulse generator is adapted to produce a continuous train of pulses.
58. (Currently Amended and Previously Added) The multicarrier-signal generator recited in claim 31 wherein the at least one of the pulse generator and the frequency selector is adapted to provide a predetermined frequency-domain window to the carrier signals.
59. (Previously Added) The multicarrier-signal generator recited in claim 31 wherein the at least one of the pulse generator and the frequency selector is adapted to provide a predetermined frequency-domain window belonging to any of a set of tapered window functions, including Hanning, Hamming, Gaussian, triangular, Bartlett, Kaiser, and Chebyshev functions.
60. (Previously Amended) The multicarrier-signal generator recited in claim 31 wherein the pulse generator is adapted to provide an identical time-dependent frequency variation to each of the carrier signals.
61. (Previously Added) The multicarrier-signal generator recited in claim 31 wherein the pulse generator is adapted to perform multiple access with respect to at least one of a

- set of multiple-access protocols, the set including frequency division multiple access, time division multiple access, and code division multiple access.
62. (Previously Added) The multicarrier-signal generator recited in claim 31 wherein at least one of the pulse generator and the frequency selector is adapted to apply at least one set of time offsets to the carrier signals.
63. (Previously Added) The multicarrier-signal generator recited in claim 31 wherein the frequency selector is adapted to select a predetermined set of carrier frequencies allocated to at least one particular user in a communication system.
64. (Previously Added) The multicarrier-signal generator recited in claim 31 further including a coupler adapted to couple the carrier signals to a communication channel.
65. (Previously Added) The multicarrier-signal generator recited in claim 64 wherein the coupler includes a plurality of transceiver elements.
66. (Previously Amended) The method of generating a multicarrier signal recited in claim 32 wherein providing for generating the plurality of information-modulated periodic pulses includes providing for modulating each of the carrier signals with the at least one information signal.
67. (Previously Amended) The method of generating a multicarrier signal recited in claim 32 wherein providing for generating the plurality of information-modulated periodic pulses includes providing for modulating one or more superpositions of the carrier signals with the at least one information signal.
68. (Previously Amended) The method of generating a multicarrier signal recited in claim 32 wherein providing for generating the plurality of information-modulated periodic pulses includes providing for modulating the carrier signals with information symbols having durations of up to the pulse period of the periodic pulses.
69. (Previously Amended) The method of generating a multicarrier signal recited in claim 32 wherein providing for generating the plurality of information-modulated periodic pulses includes providing for performing at least one of a set of modulation types, including amplitude modulation, phase modulation, time-offset modulation, and frequency modulation.
70. (Previously Amended) The method of generating a multicarrier signal recited in claim 32 further including providing for encoding information signals to generate a plurality

of coded information signals and providing for modulating the coded information signals onto at least one of a set of signals, including the plurality of periodic pulses and the plurality of carrier signals.

71. (Amended Twice) The method of generating a multicarrier signal recited in claim 32 wherein providing for generating a the plurality of information-modulated periodic pulses includes providing for generating the plurality of carrier signals, and providing for combining the plurality of carrier signals to generate the periodic pulses.
72. (Amended Twice) The method of generating a multicarrier signal recited in claim 32 wherein providing for generating a the plurality of information-modulated periodic pulses includes providing for generating pulses having carrier signals that include at least one of a set of frequencies, including intermediate frequencies, radio frequencies, and optical frequencies.
73. (Amended Twice) The method of generating a multicarrier signal recited in claim 32 wherein providing for generating a the plurality of information-modulated periodic pulses includes providing for generating a continuous train of pulses.
74. (Previously Amended) The method of generating a multicarrier signal recited in claim 32 wherein at least one of providing for generating the plurality of information-modulated periodic pulses and providing for selecting the plurality of the carrier signals includes providing for applying a predetermined frequency-domain window to the carrier signals.
75. (Previously Amended) The method of generating a multicarrier signal recited in claim 32 wherein at least one of providing for generating the plurality of information-modulated periodic pulses and providing for selecting the plurality of the carrier signals includes providing for applying a predetermined frequency-domain window to the carrier signals, the frequency-domain window belonging to any of a set of tapered window functions, including Hanning, Hamming, Gaussian, triangular, Bartlett, Kaiser, and Chebyshev functions.
76. (Previously Amended) The method of generating a multicarrier signal recited in claim 32 wherein providing for generating the plurality of information-modulated periodic pulses includes providing for applying an identical time-dependent frequency variation to each of the carrier signals.

77. (Previously Amended) The method of generating a multicarrier signal recited in claim 32 wherein providing for generating the plurality of information-modulated periodic pulses includes providing for performing multiple access with respect to at least one of a set of multiple-access protocols, the set including frequency division multiple access, time division multiple access, and code division multiple access.
78. (Previously Amended) The method of generating a multicarrier signal recited in claim 32 wherein at least one of providing for generating the plurality of information-modulated periodic pulses and providing for selecting the plurality of the carrier signals includes providing for applying at least one set of time offsets to the carrier signals.
79. (Previously Amended) The method of generating a multicarrier signal recited in claim 32 wherein providing for selecting the plurality of the carrier signals includes providing for selecting a predetermined set of carrier frequencies allocated to a particular user in a communication system.
80. (Previously Added) The method of generating a multicarrier signal recited in claim 32 further including providing for coupling the carrier signals to a communication channel.
81. (Previously Added) The method of generating a multicarrier signal recited in claim 80 wherein providing for coupling the carrier signals to ~~a~~ communication channel includes providing for processing the carrier signals by a plurality of transceiver elements.
82. (Previously Amended) The method of generating a multicarrier signal recited in claim 33 wherein providing for modulating the periodic pulses with at least one information signal includes providing for modulating each of the carrier signals with the at least one information signal.
83. (Previously Amended) The method of generating a multicarrier signal recited in claim 33 ^{wherein} providing for modulating the periodic pulses with at least one information signal includes providing for modulating one or more superpositions of the carrier signals with the at least one information signal.
84. (Previously Amended) The method of generating a multicarrier signal recited in claim 33 wherein providing for modulating the periodic pulses with at least one information

signal includes providing for modulating the carrier signals with information symbols having durations of up to the pulse period of the periodic pulses.

85. (Previously Amended) The method of generating a multicarrier signal recited in claim 33 ^{wherein} providing for modulating the periodic pulses with at least one information signal includes providing for performing at least one of a set of modulation types, including amplitude modulation, phase modulation, time-offset modulation, and frequency modulation.
86. (Amended Twice) The method of generating a multicarrier signal recited in claim 33 further including providing for encoding the at least one information signal to generate a plurality of coded information signals ~~prior to~~ wherein providing for modulating the periodic pulses with at least one information signal comprises providing for modulating the plurality of coded information signals onto at least one of a set of signals, including the plurality of periodic pulses and the plurality of carrier signals.
87. (Previously Amended) The method of generating a multicarrier signal recited in claim 33 wherein providing for generating the plurality of periodic pulses includes providing for generating the plurality of carrier signals, and providing for combining the plurality of carrier signals to generate the periodic pulses.
88. (Previously Amended) The method of generating a multicarrier signal recited in claim 33 wherein providing for generating the plurality of periodic pulses includes providing for generating pulses having carrier signals that include at least one of a set of frequencies, including intermediate frequencies, radio frequencies, and optical frequencies.
89. (Previously Amended) The method of generating a multicarrier signal recited in claim 33 wherein providing for generating the plurality of periodic pulses includes providing for generating a continuous train of pulses.
90. (Previously Amended) The method of generating a multicarrier signal recited in claim 33 wherein at least one of providing for generating the plurality of periodic pulses and providing for modulating the periodic pulses includes providing for applying a predetermined frequency-domain window to the carrier signals.

91. (Previously Amended) The method of generating a multicarrier signal recited in claim 33 wherein at least one of providing for generating the plurality of periodic pulses and providing for modulating the periodic pulses includes providing for applying a predetermined frequency-domain window to the carrier signals, the frequency-domain window belonging to any of a set of tapered window functions, including Hanning, Hamming, Gaussian, triangular, Bartlett, Kaiser, and Chebyshev functions.
92. (Previously Amended) The method of generating a multicarrier signal recited in claim 33 wherein providing for generating the plurality of periodic pulses includes providing for applying an identical time-dependent frequency variation to each of the carrier signals.
93. (Previously Amended) The method of generating a multicarrier signal recited in claim 33 wherein providing for generating the plurality of periodic pulses includes providing for performing multiple access with respect to at least one of a set of multiple-access protocols, the set including frequency division multiple access, time division multiple access, and code division multiple access.
94. (Previously Amended) The method of generating a multicarrier signal recited in claim 33 wherein at least one of providing for generating the plurality of information-modulated periodic pulses and providing for modulating the periodic pulses includes providing for applying at least one set of time offsets to the carrier signals.
95. (Previously Added) The method of generating a multicarrier signal recited in claim 33 further includes providing for selecting a predetermined set of carrier frequencies allocated to a particular user in a communication system.
96. (Previously Added) The method of generating a multicarrier signal recited in claim 33 further including providing for coupling the carrier signals to a communication channel.
97. (Previously Added) method of generating a multicarrier signal recited in claim 96 wherein providing for coupling the carrier signals to a communication channel includes providing for processing the carrier signals by a plurality of transceiver elements.